

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application. The following listing provides the amended claims with the amendments marked with deleted material crossed out and new material underlined to show the changes made.

1. (Currently Amended) A method comprising:

defining a new pixel type for the purpose of ~~image-processing~~ images of a given file type,
said given file type having a plurality of channels of image data, wherein defining said new pixel
type comprises providing a corresponding channel for each channel of said given file type;

updating codecs to support handling of images formatted in said new pixel type;

converting an image stored in a said given file type into data formatted in said new pixel
type; and

processing said data formatted in said new pixel type using standard image processing
routines, ~~said new pixel type closely correlated to said given file type, said new pixel type~~
~~containing all the components of pixels of said given file type,~~ said standard routines designed
for a color space different than that of said given file type and said new pixel type.

2. (Currently Amended) A method according to claim 1 further comprising:

enabling a user to select white levels and super-white levels in said new pixel type, said
super-white levels having a channel value greater than a maximum corresponding channel value
of said given file type.

3. (Currently Amended) A method according to claim 1, wherein said new pixel
type is ordered with ~~the~~ an Alpha channel first, followed by ~~the~~ a Y channel second, followed by
~~the~~ a Cb channel third, and ~~the~~ a Cr channel fourth, said converting including re-ordering of said
data in given file type to match the order of said new pixel type.

4. (Currently Amended) A method according to claim 3-1, wherein said defining includes:

~~providing for the Alpha channel to range from 0 to 255~~ at least one channel with an extended range.

5. (Currently Amended) A method according to claim 3-1, wherein said defining includes:

utilizing of ~~said~~ a luminance channel such that black corresponds to a ~~Y~~ luminance value of 0.

6. (Currently Amended) A method according to claim 4, wherein said channel with the extended range is an Alpha channel, wherein said converting includes:

if said Alpha channel was present in said given file type, then merely extending the range of said Alpha channel to correspond to the new pixel type definition; and

if said Alpha channel was not present in said given file type, then filling in Alpha values for the Alpha channel.

7. (Currently Amended) A method according to claim 5-1, wherein said converting includes:

subtracting a fixed offset value from ~~the~~ at least one channel of data in said given file type.

8. (Currently Amended) A method according to claim 3 1, wherein said defining includes:

~~providing for the Alpha channel to range from 0 to 255~~ at least one channel with an extended range; and

utilizing of said ~~Y~~ a luminance channel such that black corresponds to a ~~Y~~ luminance value of 0.

9. (Original) A method according to claim 8 wherein said converting includes:
if said Alpha channel was present in said given file type, then merely extending the range of said Alpha channel to correspond to the new pixel type definition; and
if said Alpha channel was not present in said given file type, then filling in Alpha values for the Alpha channel; and
subtracting a fixed offset value from the Y channel of data in said given file type.

10. (Currently Amended) A method according to claim 1 wherein said given file type has pixels of type v408, and said standard image processing routines ~~were~~ are designed for RGB data.

11. (Currently Amended) A method according to claim ~~10~~ further 1, wherein said processing is confined to routines that are not color space specific.

12. (Currently Amended) A method for processing an image of a given file type having a plurality of channels of image data, said method comprising:

converting said image into data formatted for a new pixel type, ~~said new pixel type~~ closely correlated with and having all the components of pixels for said given file type said new pixel type defined by a corresponding channel for each channel of said given file type; and

processing said data formatted in said new pixel type using standard image processing routines, said standard routines designed for ~~data having different components of pixels~~ a color space different than that of said new pixel type and said given file type.

13. (Original) A method according to claim 12 further comprising:
converting said processed data back into format of said given file type.

14. (Original) A method according to claim 13 further comprising:
decompressing said image prior to said converting if said given file type stores component data in a compressed form.

15. (Original) A method according to claim 13 comprising:
compressing said processed data after said converting back of said processed data into the format of said given file type.

16. (Currently Amended) A method according to claim 12, wherein said new pixel type includes an Alpha, a Y, a Cr and a Cb channels, said Alpha channel extended in range, said Y channel has a value of Black corresponding to zero, all said channels reordered to correspond closely with said standard routines.

17. (Currently Amended) A computer readable medium having a set of computer instructions, said computer instructions comprising sets of instructions for: ~~An article comprising a computer readable medium having instructions stored thereon which when executed cause:~~

defining a new pixel type for the purpose of ~~image-processing~~ images of a given file type,
said given file type having a plurality of channels of image data, wherein defining said new pixel type comprises providing a corresponding channel for each channel of said given file type;

updating codecs to support handling of images formatted in said new pixel type;

converting an image stored in a said given file type into data formatted in said new pixel type; and

processing said data formatted in said new pixel type using standard image processing routines, ~~said new pixel type closely correlated to said given file type, said new pixel type containing all the components of pixels of said given file type~~, said standard routines designed for a color space different than that of said given file type and said new pixel type.

18. (Currently Amended) A computer readable medium having a set of computer instructions for processing an image of a given file type having a plurality of channels of image data, said computer instructions comprising sets of instructions for: ~~An article comprising a computer readable medium having instructions stored thereon which when executed enable processing an image of a given file type, said instructions causing:~~

converting said image into data formatted for a new pixel type, ~~said new pixel type closely correlated with and having all the components of pixels for said given file type~~ said new pixel type defined by a corresponding channel for each channel of said given file type; and

processing said data formatted in said new pixel type using standard image processing routines, said standard routines designed for ~~data having different components of pixels~~ a color space different than that of said new pixel type and said given file type.

19. (Currently Amended) ~~An article according to claim 17~~ The computer medium of claim 17, wherein said new pixel type includes an Alpha, a Y, a Cr and a Cb channels, said Alpha channel extended in range, said Y channel has a value of Black corresponding to zero, all said channels reordered to correspond closely with said standard routines.

20. (Currently Amended) An apparatus comprising:

means for defining a new pixel type for the purpose of ~~image processing~~ images of a given file type, said given file type having a plurality of channels of image data, wherein defining said new pixel type comprises providing a corresponding channel for each channel of said given file type;

means for updating codecs to support handling of images formatted in said new pixel type;

means for converting an image stored in a said given file type into data formatted in said new pixel type; and

means for processing said data formatted in said new pixel type using standard image processing routines, ~~said new pixel type closely correlated to said given file type, said new pixel type containing all the components of pixels of said given file type,~~ said standard routines designed for a color space different than that of said given file type and said new pixel type.

21. (Currently Amended) An apparatus enabling processing an image of a given file type having a plurality of channels of image data, comprising:

means for converting said image into data formatted for a new pixel type, ~~said new pixel type closely correlated with and having all the components of pixels for said given file type~~ said new pixel type defined by a corresponding channel for each channel of said given file type; and

means for processing said data formatted in said new pixel type using standard image processing routines, said standard routines designed for ~~data having different components of pixels~~ a color space different than that of said new pixel type and said given file type.

22. (New) A method for processing an image of a given file type having at least two channels of image data, said method comprising:

converting said image of a given file type into image data of a new pixel type, said new pixel type defined by a corresponding channel for each channel of said given file type plus an additional channel that does not correspond to a channel of said given file type, wherein at least one corresponding channel has an extended range;

processing said image data of said new pixel type.

23. (New) The method of claim 22, wherein said image of said given file type is compressed, wherein converting comprises decompressing said compressed image.

24. (New) The method of claim 23, wherein the decompression is performed by a decompression module, wherein the decompression module is configured to add channel data for said additional channel.

25. (New) The method of claim 22 further comprising converting said processed image data back into image of said given file type.

26. (New) The method of claim 25, wherein said image of said given file type is compressed, wherein said converting is performed by a compression module.

27. (New) A method for processing an image of a given file type having at least two channels of image data, said method comprising:

converting said image of a given file type into image data of a new pixel type, said new pixel type defined by a corresponding channel for each channel of said given file type, wherein converting comprises reordering at least two channel of said given file type; and

processing said image data of said new pixel type.

28. (New) The method of claim 27, wherein converting further comprises subtracting a fixed offset value from at least one channel of said given file type.

29. (New) A method for processing an image of a given file type having at least two channels of image data, said method comprising:

converting said image of a given file type into image data of a new pixel type, said new pixel type defined by a corresponding channel for each channel of said given file type, wherein comprises subtracting a fixed offset value from at least one channel of said given file type;

processing said image data of said new pixel type.